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ABSTRACT

Twenty dyads--ten middle-class mothers and ten lower-class mothers and their two-year-old children--were videotaped in a play situation. Variables in speech and utterance production were examined for change across condition (awareness or ignorance of being observed) and across socioeconomic class within condition. The number of utterances was significantly greater in the observed condition for both classes. Utterance length of mothers was found to be not only lower than for speech directed toward an adult listener, but to be context sensitive as well. In the observed condition, middle-class mothers' speech was consistently shorter than in the unobserved condition; for lower-class mothers, this relationship was reversed. Both classes of mothers increased gestural production and asked more questions in the observed condition. Socioeconomic status affected the production of several syntactic forms, as well as the distribution of utterances across pragmatic categories. Naming and action games increased in the observed condition for both classes, as did overall interaction; aspects of gaming and interaction were also found to be class-sensitive. These findings call into question the traditional literature on the representativeness of data across contexts and on the relationship of socioeconomic class and effectiveness of maternal teaching. (JB)

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THE EFFECT OF CONTEXT ON MOTHER-CHILD INTERACTION-INTERACTIONAL CHANNEL SELECTION FOR THE VIEWING AUDIENCE

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In the area of language acquisition, specification of the linguistic environment with which the child has contact is essential if developmentalists are to begin to understand the nature of the language acquisition process--that is, what constitutes "input" for the child and how it is assimilated.

In recent years, there has been a concerted effort to try to assess the possible experiential input to the child's developing language system by closely examining the linguistic environment provided by his primary caretaker--usually the mother. Researchers like Snow (1977), Newport (1976) and Shatz (1979), among others, have been concerned with analysis of the verbal and non-verbal messages with which the child has contact in his everyday life. While the jury is still out on the actual relationship between input and the emerging structure of the child's language, there are some aspects of the methodology of investigation which have been somewhat neglected and which are addressed in the present study of the effect of context on mother-child interaction.

Up to this point in time, much of the literature on mother-child interaction has been based on the analysis of observations of so-called "naturalistic" behavior. Using what are considered to be "naturalistic methods," samples of behavior are captured through the use of some type of recording device or through observation with an experimenter present. It is usually assumed by the investigators that what is being obtained is a sample of typical everyday behaviors occurring

between mother and child. The observer and his camera or tape recorder are considered simply a neutral "third eye" to which the mother and child have become accustomed. Subsequently, general claims are often made about the nature of interactional phenomena across contexts on the basis of these data.

I would like to present evidence that the presence of an observer and/or his equipment is more intrusive than not, and that this presence may redefine the context for subjects and elicit behavioral performances which differ significantly from those which might occur in other contexts, such as when the subjects are alone or are unaware of being observed.

There has been evidence in the sociological and psychological literature showing how various contexts elicit different behaviors. Hymes (1962), for instance, suggested that social variation in speech use might be due to changes in such factors as the type of speech event being engaged in, the roles of the various parties, and the topic and style of the discussion. Labov (1972) and Hall (1977) also demonstrated that the presence of a particular audience could elicit different linguistic strategies from both adults and children.

Some research in psychology has also supported the suspicion that mothers, in particular, have ideas about what behaviors are appropriate for displays of mother-child interaction in an experimental context. A study by Brazelton,

Koslowski & Main (1974) showed that, in the experimental situation, white middle class mothers assumed they were to play the role of the socializer, constantly stimulating their infants despite reassurances from the experimenter that such intensive interaction was neither expected nor required. Some of the children in this study reportedly were forced to turn away from their zealous mothers in order to avoid the constant stimulation.

Present interest in the effect of the observer's presence on the nature of mother-child interaction arose during a study of maternal gesturing involving the analysis of videotaped interactions between mothers and their young children (Shatz and Graves, 1976). The research focused on gaining some insight into the role of mothers' gestural signals in the child's language acquisition process. The videotapes we worked with represented supposedly "naturalistic" interactions between mother and child, though it soon became apparent that both members of the dyad were orienting to the presence of the camera and experimenter during the course of the interactions. One of the mothers even asked the experimenter directly if she was "doing what she was supposed to do," and another inquired as to whether her child's linguistic ability was comparable to that of other children his age. Though subjects may have become "accustomed" to the experimenter's presence as a result of preparatory interactions with her, they were clearly not oblivious to it.

What our naturalistic videotapes seemed to be picking up were displays of behavior for an observer, structured for a viewing audience, and seemingly intended to show the dyad in the best public light--the child as an attentive and competent student, and the mother as an interested, caring teacher. It may be the case that much of the data-base in the traditional interactive literature represents a rather specialized collection of behaviors, representative of interaction style for particular subjects in a constrained interpersonal setting, and may not necessarily be generalizable across contexts.

In order to look for mappings between mothers' and children's communicative behaviors, we would have to determine how representative the collected data are of the interactive history of mother and child, which clearly extends beyond the limits of observation. In 1978, a pilot study by Graves and Glick tried to place "representativeness" into question by seeking to evaluate the impact of contextual manipulations on mother-child behavioral displays. We chose to examine the effect of the presence or absence of an audience (the experimenter) on the behaviors of white middle class mothers and their children of language-learning age. A preliminary analysis of this pilot data revealed that several aspects of the mother's behavior did change markedly with the change in interpersonal context (Graves and Glick, 1978).

In the current study I set out not only to gain more

in-depth information about the nature of mother-child interaction with and without an observer present, but to see if behavioral displays among middle-class and lower-class mothers were similar in the presence of the experimenter and when dyads believed themselves to be alone. It was suspected that performances might differ as a function of social class and educational level.

In the present study, subjects consisted of twenty dyads--ten white middle-class mothers and ten white lower-class mothers and their two-year-old children. For the purposes of this study, middle-class mothers were defined as having completed education past the high school level and where familial income was gained from white-collar employment. Lower-class subjects were defined as coming from families where education had not gone past the completion of high school and where familial income came from either welfare payments or blue-collar employment.

Subjects were videotaped in a well-stocked playroom at City University of New York under two conditions. In the first condition, dyads were not aware that they were being videotaped through a one-way mirror, and were unaware of the presence of the observer. In the second condition, the mothers and children were aware that they were being observed and videotaped by the experimenter. In both conditions mothers were instructed to play naturally with their children, as they would at home if there were no one around. All subjects

participated in both Condition I and II. The order of the presentation of the observed and unobserved condition were counterbalanced to control for sequence effects.

A total of 137 variables were examined for change across condition and across socioeconomic class within condition, through a two-way analysis of variance. There were many aspects of mother-child interaction which were found to vary significantly with context.

Speech and Utterance Production (See Table 1)

The number of words and utterances produced was found to be significantly greater in the observed condition for both lower and middle-class mothers as compared with speech production in the unobserved condition. This had been one of the striking findings in the pilot work among middle-class mothers in interaction with their children. The present study both replicated the previous finding and determined that increased verbal production was also an aspect of performance in the observed condition for lower-class mothers.

This increase in verbal activity accompanied a general increase in maternal interaction with the child when the mother is aware of the presence of the observer.

Mean Length of Utterance (M.L.U.) (Table 1)

Newport (1976) and Snow (1977) have noted that mothers accommodate their speech to children by producing higher-pitched, slower, syntactically simpler and shorter utterances to children than in their speech to adults. A dominant feature of this "Motherese" is the brevity of the utterances, which could account for some of the other factors which characterize maternal speech adjustment.

The present study shows, however, that the production of "Motherese" is even more complex. Though it is true that mothers do seem to decrease the mean length of the utterances in their speech to children relative to speech produced for an adult listener, it is also the case that the reduction of utterance length is context-sensitive. In the observed condition, middle-class mothers produced shorter utterances than when they were unaware of being observed. In addition, the variability in the length of utterance production for these mothers was also smaller. Therefore when the experimenter was present, she was collecting a sample of speech which was shorter, and more consistently shorter, than speech produced in the same setting, by these same middle-class mothers, when they assumed they were alone. Whether or not the brevity of maternal utterances aids the child in the language-learning process, the adjustment of maternal speech seems to be part of an overall attempt to improve communication with the child and

elicit cooperation for the mutual production of interactional displays.

For the lower-class mothers, M.L.U. was almost identical to that of the middle-class mothers in the observed condition. However, rather than this resulting from a "gearing down" adjustment of the length of utterance in the observer's presence, it represented a slight increase over the mean length of utterance in the unobserved condition. In addition, the mean standard deviation of the lower-class mothers showed that there was more variability in general in the length of utterances produced than there was for middle-class mothers in either condition. The lower class mothers tended to vascillate between very short utterences ("Come!" or "Sit!") and longer ones ("Be quiet, 'cause mommy is trying to work on this Tweety puzzle now."), and there did not appear to be an attempt to consistently synchronize speech with the assumed processing capacity of the child. The fine-tuning of maternal speech did not appear to be as much a part of the interactional mother-child performance in the presence of the observer for lower-class mothers as it was for the middle-class mothers.

Non-verbal Maternal Gestures (See Table 2)

It has been suggested by Bruner (1975) and others that mothers may help their children process speech by directing their attention to some aspects of the non-linguistic

environment, since presumably the child who attends to context can form an analogy between the events or the objects around him and the speech he is hearing. It is unclear to what extent supplementary gestures actually help a naive listener of two-years, but there is evidence that mothers believe non-verbal signalling will aid in the linguistic processing and responding, and mothers have been found to gesture to their children with great frequency.

The present study found that for the seven basic gestural types previously identified by Shatz and Graves (1976), both middle and lower-class mothers increased overall gestural production in the observed as compared with the unobserved condition. In addition, the "presentation" gesture (the most frequently used gesture by both sets of mothers) was also produced with greater frequency in the observed condition (see Figure 1). This is a gesture which has been found to be associated in particular with action-oriented games (Shatz and Graves, 1976). For both sets of mothers, there appears to be an attempt to get more interaction going, and to keep the child's attention focused on the activities at hand through gesture production in the presence of the observer.

Syntactic Analysis of Maternal Speech (See Table 3)

The syntactic analysis of mothers' speech was useful in characterizing the grammatical content of the linguistic

input to the child in the two different experimental contexts. It has already been noted by Newport (1976) and others that mothers, in general, ask many questions of their children. However, it seems that the extent of increased question production is also affected by change in context. Middle-class and lower-class mothers both produced a greater number of questions on the average in the observed condition. This may be a result of the mothers from both groups trying to elicit displays of known information from their children and trying to maintain interactive contact with them in the presence of an observer.

The relative distribution of other syntactic forms remained relatively stable across conditions.

There was a main effect of socioeconomic status, however, on the production of several syntactic forms. Lower-class mothers were found to produce a significantly greater number of imperatives than did middle-class mothers in both conditions. Middle-class mothers, on the other hand, were found to produce a greater number of declaratives. One might initially conclude that lower-class mothers direct their children with language more than do middle-class mothers, but these findings need to be viewed in light of the nested pragmatic analysis which follows. It turns out that directiveness does in fact vary with social class, but is also very context dependent.

Nested Pragmatic Categories (See Table 4)

Speech was divided into two functional categories: 1) directives--where the mother's speech "intended" the child to display language or perform an action; and 2) topic comments--which were non-directive comments about the ongoing activities or objects present in the surround. It was apparent that as Austin (1962) and Ervin-Tripp (1976) have pointed out, the syntactic expression of these two functional forms was variable. For instance, "Get me the elephant!" "Why don't you get me the elephant?" and "I would like you to get me the elephant.," etc. can all mean the same thing pragmatically, though they take on varying syntactic surface forms. In a given situation, they can all serve as requests for the child to bring the elephant to the mother.

In the unobserved condition, the middle-class mothers' speech consisted of approximately one-third directives and two-thirds topic-comment utterances. In the observed condition, however, the proportion was reversed, with directives accounting for approximately two-thirds of the utterances. The directives, for the middle-class mothers, however, consisted primarily of questions and declaratives, rather than the direct imperative form.

For the lower-class group, directives accounted for approximately 80% of the utterances in both conditions. Not only was this a difference in the proportion of functional

utterance types produced in relation to the middle-class mothers, but also reflected the syntactic differences noted above. Directives were most often given in the imperative form by the lower-class mothers. This is the most explicit directive sub-type, since its literal meaning is a request for action. For the lower-class mothers who use this direct imperative form, the directing of the child is more out in the open. For the middle-class mothers, using the indirect forms of directives, particularly in the presence of the observer, allowed them to elicit performances from their children without appearing to be issuing orders.

Experimenters who are interested in characterizing the nature of the teaching that goes on between mother and child, may find the lower-class mothers <u>appearing</u> to be more directive with their children on the basis of the syntactic form of the utterances produced, whereas, in fact, in the <u>observed</u> condition, the two groups are quite similar if viewed from a pragmatic perspective.

<u>Interactional Game Sequences</u> (See Table 5)

Many researchers have noticed the incidence of routines and structured game sequences in interactions between mother and child (Bruner, 1974; Miller, 1980; Thomas, 1979), but few have looked at the production of these sequences in relation to the effect of context.

Two main types of interactional routine--the naming game and the action game--were found to be prevalent among the mother-child pairs in this study, as they were in the pilot work. These are patterned interactions involving both verbal and gestural components, structured into a predictable cyclical format. They serve as a type of interactional blueprint, or social script, into which the mother can systematically insert any number of vocabulary words or physical tasks for the child to learn or display. The routines seemed to act as a functional frame for the rehearsal and display of previously acquired knowledge, particularly on occasions where the child is called upon to perform. Since the children are familiar with these formats, and may also be practiced with the specific material, they tend to look more knowledgable and attentive when engaged in them.

There was a significant effect of condition on the production of naming and action game sequences for both middle and lower-class mothers, where game production was increased in the observed condition. Overall, action games accounted for the greatest amount of interaction time for dyads from both socioeconomic groups. The heavier weighting on action games was interesting in light of Shatz's finding that young children are primarily action-oriented in their responses, particularly when presented with utterances which overburden their existing processing capacity.

It was the naming game sequences, however, which

increased most dramatically in frequency with the presence of the observer. Naming objects was apparently valued as an appropriate interactional display for the observer by both middle and lower-class groups.

In addition, the free play situation between mother and child also contained periods with no joint focus of attention, in which mother and child were not mutually engaged in any joint activity. There was a main effect of both condition and socioeconomic status on the average relative amount of time spent with no joint focus as opposed to some form of mutual interaction. All mother-child pairs were found to spend a significantly greater amount of time in periods with no joint focus in the unobserved condition, though for the lower-class dyads more of these unfocused periods appeared in interactional sequences in the observed condition, relative to the middle-class mothers.

There were also transition periods, in which the nature of the next interaction was being negotiated, and conversational periods, during which there was non-directive discussion of a topic, though there were no statistically significant differences in the production of these periods across context or socioeconomic group.

Initiations of Interactions (See Table 6)

The number of times mothers and children attempted to

initiate interactions with each other was analyzed. These initiation attempts took the form of either a verbal or gestural offer to the other member of the dyad to play or speak. For both middle and lower-class mothers, attempts to initiate interactions with their children increased significantly across condition. However, the increase was much greater among the middle-class mothers who approximately tripled the number of initiation attempts when they were aware of the observer's presence. For both groups, the observed condition appeared to be a context in which there was an expectation on the part of the mother that a display of more interactive contact was desirable.

In contrast, the children's attempts at initiating interaction remained extremely consistent both across condition and across socioeconomic status. Once again this points up the fact, that, at least for children at age two, much of what the mothers do seems to relate either to the "perceived" level of ability of their children, or represents an attempt to elicit certain interactional performances from them, but does not appear to have a marked effect on the children's actual behavior.

Responses to Attempts at Initiating Interaction (See Table 7)

Responses to mothers' and children's attempts at initiating interaction were coded as either positive or negative,

depending on whether the initiation attempt was acknowledged and followed by participation in the interaction by the other member of the dyad, or whether the attempt went unheeded.

Here too, there was a main effect of SES and condition, with the middle-class mothers in particular in the observed condition responding more positively to the child's initiation attempts. Lower-class mothers responded positively to only about 60% of the children's initiation attempts in both conditions.

This difference is interesting in that it again indicates that for the middle-class mothers, part of an appropriate display for the experimenter seems to involve interactional "give and take" with the child. Not only are the offers for play increased, but the child's requests for interactive contact are acknowledged and responded to more quickly when the mothers were aware of being observed.

The lower class mothers also seemed to perceive the presence of the observer as cause for increasing their child's activity level, but not necessarily interactively. The increase in attempts at initiating interaction in the observed condition goes along with their use of imperatives. These mothers are more likely to order their children to play alone, to get the child started on a play project and then withdraw from the game, or to get the child to produce certain traditional ritualized performances, such as counting or saying the alphabet.

Number of Rounds (See Table 8)

Analysis was performed on naming and action game sequences, measuring the length of these interactional routines in terms of the mean number of cyclical rounds per game for each of the dyads. There was found to be a significant main effect of socioeconomic status and condition on the mean number of rounds produced in the game sequences, with the mean number of rounds being significantly greater for the middle-class pairs than for the lower-class. It was also noted that the lower-class dyads had a much greater incidence of terminating game sequences after only a very brief interaction--that is, there were a large number of games that lasted for only one round or less. The fact that, in contrast, the middle class mothers and children did present action or naming games for display more frequently in the observed condition, and developed these games through an average of 3.5 rounds, may be evidence that these game sequences were familiar formats for this group of mothers and children.

Observed Differences in the Nature of the Game Structure

Though both lower and middle-class dyads engaged in naming and action games, the format and execution of those games differed somewhat between the two groups on a number of features.

In addition to the differences in the number of rounds in the games, as was previously described, there were a large number of aborted or incomplete games, which were apparently cut off prematurely by mothers and children of the lower-class sample in both conditions. For instance, a mother might initiate a naming game by asking a question about an object in the room, the child would respond with an incorrect answer, and the mother would neither repair or validate the response. Often after initiating a game, the mothers seemed to lose interest in it, or became involved with another activity by the time the child answered, and the game went no further.

In contrast, the middle-class mothers and children usually pursued a game, once initiated, until the child had lost interest or would no longer respond.

A number of mother-child pairs among the lower-class group also exhibited a variant of the game format which had been identified previously (Graves and Glick, 1978). Rather than the mother being the primary initiator of the questioning, as is the case in the naming and action games of the middle-class mothers and children, the lower-class children frequently assumed the role of the questioner. It was very often up to the child, among the lower-class dyads, to engage the mother in play. This was one of the socio-cultural variants that became apparent in the course of the analyses.

Maternal Responses to Children's Questions (See Table 9)

Maternal responding to children's questions followed a similar pattern to responses to initiation attempts. Though both middle and lower-class mothers responses to children's questions in the unobserved condition were quite similar, responses falling almost evenly into the categories of correct, inappropriate and no response, in the observed condition, both sets of mothers increased the number of correct responses to children's questions and decreased the amount of inappropriate and non-responding. This change was of a high order of magnitude, particularly for the middle-class mothers who more than doubled the number of correct responses to children's questions when they knew they were being watched.

Foregrounding of Expectations for Performance

There was also some foregrounding of expectations for performance stated within the text of the mother-child interaction itself. Among lower-class mothers, for instance, there were some direct statements that seemed to indicate that the child's simply speaking or playing alone would satisfy the mothers' requirements for adequate performance in the observed condition. Statements like "Say your numbers," or "Sit quietly and play" were common directive forms for the lower-class mothers. Speaking, repeating the mothers' utterance, playing alone and saying the numbers or alphabet, were the most

frequently foregrounded directives for the lower-class mothers.

In contrast, the middle-class mothers' technique was more often to initiate games and steer their children by using indirect directives and test questions, working more toward getting interaction going between mother and child particularly in the observed condition. A middle-class mother would be more apt to ask her child, "Wouldn't you like to play blocks with me?" in order to begin a game sequence with him, whereas a lower-class mother might simply say, "Go play with your blocks." For the middle-class mothers, though their requirements for good performances were seldom foregrounded or stated outright as directives, there seemed to be value to having the child answer questions accurately, perform manual tasks with facility, and interact constantly in a reciprocal manner with the mother in the presence of the observer. This was evidenced by the shift in the amount and types of interaction engineered by the middle-class mothers in the observed condition.

Summary and Implications

The primary implications of this study are threefold:

1) First, the study raises questions about the accuracy of the traditional literature on mother-child interaction and language aquisition, and the representativeness of data across contexts. Since mothers and children clearly

change certain aspects of their behavior when the interpersonal context changes, descriptions of behaviors obtained with an observer present may represent a subset of behaviors geared for a particular viewing audience. The data collected with an observer present may, in fact, be representative of mother-child behavioral displays produced for interpersonal audiences perceived as similar to an experimenter by the subjects (i.e. authority figures, teachers, etc.), but is most likely not representative of behaviors across all contexts.

In addition, some studies have characterized lower-class mothers as inferior teachers and their methods of instruction as creating limitations on their children's cognitive and communicative skills. The present study has shown that on many of the measures, middle and lower-class mothers look more similar in interaction with their children when they are <u>not</u> aware of the observer's presence. The experimenter, whose background is likely to be a middle class one, may be responding to the presentation of the <u>expected</u> interactional performance by middle-class mothers in an "observed" condition, and an unexpected display of behaviors on the part of the lower-class dyads. This match or mismatch of performance and expectation may inadvertently color the experimenter's characterization of what is going on between mother and child.

2) Second, it was interesting to note that all measures of the two-year old children were quite similar and stable both across condition and across socioeconomic class, despite the variation in maternal input. This is evidence in support of the contention that mothers' behaviors are often more a product of where mothers think their children are at, than of any definitive effect of their manipulation on the child's behavioral output. It also seems that at age two, there is a core of language being learned by almost all children, where primarily it is the rate of acquisition which varies. Differences may come in at a later stage of development.

3) The learning of social conventions by the child was also addressed by this study. Although differences did not appear in the performances of these young children on the variables examined, there is ample evidence in the literature that children eventually learn the interactive styles and social conventions displayed in the family system. In the interactive and learning situation, the child is always learning more than what the adult may be intending to teach, and one thing the child may be picking up is the nature of requirements for a good performance when the interpersonal audience is perceived as a formal one. For the middle-class children, this seems to involve the construction of an interaction with the adult in which both members of the dyad are actively involved with each other and mutually

responsive within routinized formats. For the lower-class child, the performance seems to involve a display of child knowledge, often ritualized, and within a different interactional frame.

These differences may also effect a child's functioning in a traditional school system with the orientation of the middle-class teacher. Depending on his background experience, a child may encounter either a match or mismatch between his own and his teachers' conception of what constitutes an appropriate informational display. Similarly, in formal testing situations (i.e. I.Q. testing) differences in performance expectations for these contexts can dramatically effect a child's performance and his subsequent evaluation and labeling by the examiner.

I would never claim that the present study has shown "naturalistic behavior" (in the unobserved condition) in contrast to "un-natural" or "less natural" behavior (in the observed condition), but rather than human life is richly textured, and mothers and children are involved in numerous contexts in the course of the day. These contexts, I believe, are defined primarily by the subjects' perception of the interpersonal audience present, and partly by the physical setting in which they find themselves. The relative contribution of these factors on the production of various behavioral displays has yet to be investigated, however, behaviors are likely to be adjusted frequently according to a

sense of what is appropriate to that context. It may be the case that a "taxonomy" of contexts may exist, defined by an individual within a given culture, where certain types of behaviors are displayed consistently for certain audiences within a particular category. I would just want to stress the importance of using a broad, culturally-relative perspective when looking at aspects of language-learning, which would take into account the context of elicitation as well as what is considered appropriate to those contexts by the people being investigated.

REFERENCES

Austin, J. (1962). How to do things with words. Cambridge, Mass.: Harvard University Press.

Brazelton, T., Koslowski, B. & Main, M. (1974). The origins of reciprocity: Early mother-child interaction. In M. Lewis and L. Rosenblum (eds.), The effect of the infant on its caregiver. New York: John Wiley Press.

Bruner, J. (1974). Organization of early skilled action. Child Development 44. 92-96.

Bruner, J. (1975). From communication to language--a psychological perspective. Cognition 3. 255-287.

Ervin-Tripp, S. (1976). Is Sybil there? The structure of some American English directives. Language in society 5. 25-66.

Graves, Z. and Glick, J. (1978). The effect of context on mother-child interaction: A progress report. The Quarterly Newsletter of the Institute for Comparative Human Development 2(3). 41-46.

Hall, W.S., Cole, M. Reder, S. & Bowley, G. (1977). Variations in young children's use of language. In R. Freedle (ed.), Discourse production and comprehension (Vol. I). New Jersey: Ablex Publishers.

Hymes, D.H. (1962). The ethnography of speaking. In T. Gladwin and W. Stirtevant (eds.), Anthropology and Human Behavior. Washington, D.C.: Anthropological Society of Washington Press. 15-53.

Labov, W. (1974). Language in the inner city. Philadelphia: University of Pennsylvania Press.

Newport, E.L. (1976). Motherese: the speech of mothers to young children. In N. Castellan, D. Pisoni & G. Potts (eds.), Cognitive Theory (Vol. II). Hillsdale, New Jersey: Lawrence Erlbaum Associates.

Shatz, M. On the mechanisms of language acquisition: Can features of the communicative environment account for development. (In press, 1979).

Shatz, M. and Graves, Z. The role of maternal gesturing in language acquisition: Do actions speak louder than words. Paper presented at the Boston Child Language Conference, October, 1976.

Snow, C.E. (1977). Mother's speech research: from input to interaction. In C.E. Snow and C.A. Ferguson (eds.), Talking to children: Language input and acquisition. Cambridge, England: Cambridge University Press.

Thomas, E.K. It's all routine: a redefinition of routines as a central factor in language acquisition. Unpublished paper presented at Boston Child Language Conference, 1979.

Table 1

Maternal Speech Production

Middle Class

	Mean # Words	Mean # Utterances	(MLU) Mean Length of Utterance	Mean Standard Deviation of MLU
Observed	529	157.1	2.99	1.64
Unobserved	332	103.8	3.78	1.98

Lower Class

	Mean # Words	Mean # Utterances	(MLU) Mean Length of Utterance	Mean Standard Deviation of MLU
Observed	572	182.5	2.91	2.78
Unobserved	370	133.5	2.49	2.65

Main effect of condition for Mean # Words ($p < .01$)
Main effect of condition for Mean # Utterances ($p < .01$)
Main effect of SES ($p < .001$) and Interaction ($p < .001$) for M.L.U.
Main effect of SES ($p < .001$) and Interaction ($p < .001$) for S.D. of M.L.U.

Table 2

Non-Verbal Maternal Gestures (See Figure 1)

(Mean Number of Gestures per Session)

	Middle Class					
	Presentation	Pointing	Point-Tapping	Demonstration	Iconic Action	Tapping
Observed	13.0	6.3	1.1	7.4	0.1	0.5
Unobserved	7.2	3.6	0.6	4.7	0.0	1.4
	Lower Class					
	Presentation	Pointing	Point-Tapping	Demonstration	Iconic Action	Tapping
Observed	17.3	7.6	3.9	12.4	0.0	0.5
Unobserved	9.5	8.5	0.9	7.7	0.4	0.2

Main effect of condition on number of presentation gestures ($p < .02$)

Table 3

Syntactic Analysis of Maternal Speech (Production of syntactic types in relation to total speech production)

	Questions	Declaratives	Imperatives	Exclamations	Attention words	Noun phrases	Verb phrases
Middle Class							
Observed	43%	24%	11%	13%	3%	5%	2%
Unobserved	30%	30%	9%	17%	3%	7%	3%
Lower Class							
Observed	23%	15%	37%	12%	5%	7%	1%
Unobserved	17%	16%	37%	16%	5%	9%	1%

Main effect of condition ($p < .01$) and SES ($p < .0001$) for production of Questions
Main effect of SES for production of Imperatives ($p < .0001$)
Main effect of SES for production of Declaratives ($p < .003$)

Table 4

Nested Pragmatic Categories in Maternal Speech

	Middle Class	
	Topic Comment	Directive
Observed	38%	61%
Unobserved	64%	35%

	Lower Class	
	Topic Comment	Directive
Observed	23%	77%
Unobserved	20%	79%

Main effect of condition ($p < .0001$), SES ($p < .0001$) and an interaction effect ($p < .0001$)

Table 5

Interactional Sequences--Relative Temporal Divisions

	Middle Class				
	Action Games	Naming Games	No Joint Focus	Transition	Conversation
Observed	54%	25%	2%	14%	5%
Unobserved	42%	17%	20%	18%	3%

	Lower Class				
	Action Games	Naming Games	No Joint Focus	Transition	Conversation
Observed	52%	18%	13%	16%	1%
Unobserved	42%	10%	31%	17%	0%

Main effect of condition ($p < .002$) and SES ($p < .05$) on time spent with No Joint Focus of Attention

Main effect of condition ($p < .03$) on production of Game Sequences (Naming and action combined)

Table 6

Attempts at Initiating Interaction

(mean number of initiation attempts)

Middle Class

	Mothers' Initiation Attempts	Children's Initiation Attempts
Observed	17.4	8.5
Unobserved	5.4	8.5

Lower Class

	Mothers' Initiation Attempts	Children's Initiation Attempts
Observed	11.1	7.8
Unobserved	4.3	7.1

Main effect of condition ($p < .03$) and SES ($p < .003$) on M.'s Initiations

Table 7

Responses to Attempts at Initiating Interactions

	Middle Class			
	Mother's percentage positive responses	Mother's percentage negative responses	Children's percentage positive responses	Children's percentage negative responses
Observed	85%	15%	49%	51%
Unobserved	60%	40%	51%	49%
	Lower Class			
	Mother's percentage positive responses	Mother's percentage negative responses	Children's percentage positive responses	Children's percentage negative responses
Observed	58%	42%	48%	52%
Unobserved	56%	44%	53%	47%

Main effect of condition ($p < .04$) and SES ($p < .03$) on maternal responses to child's initiations

Table 8

Mean Number of Rounds in Naming

and Action Game Sequences

	Middle Class	
	Naming Games	Action Games
Observed	3.57	3.53
Unobserved	3.03	2.82

	Lower Class	
	Naming Games	Action Games
Observed	1.62	1.64
Unobserved	1.49	1.30

Main effect of condition for length of games ($p < .02$)
Main effect of SES for length of game ($p < .0001$)

Table 9

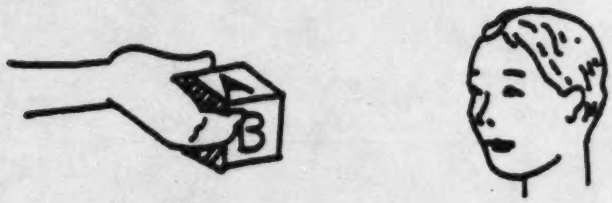
Maternal Responses to Children's Questions

	Middle Class		
	Correct	Inappropriate	No Response
Observed	84.8%	8.6%	6.6%
Unobserved	39.4%	28.3%	32.3%

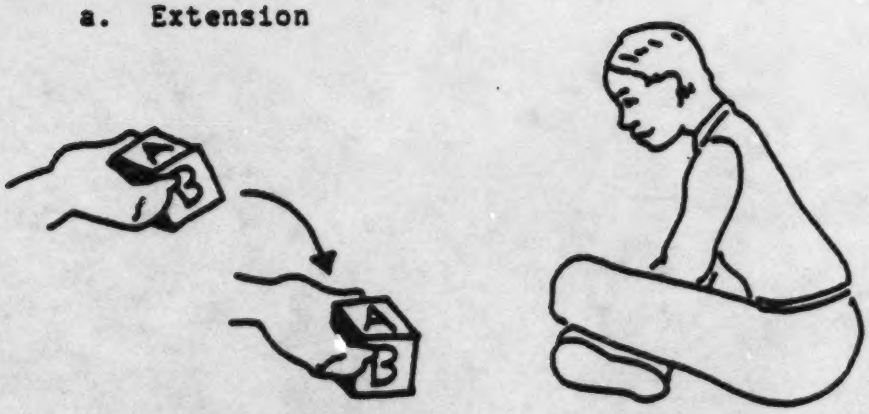
	Lower Class		
	Correct	Inappropriate	No Response
Observed	54.6%	21.5%	23.9%
Unobserved	29.1%	32.3%	38.6%

Interaction effect for relative number of correct maternal responses ($p < .002$) and inappropriate maternal responses ($p < .05$) and no responses ($p < .003$)

PRESENTATIONS:



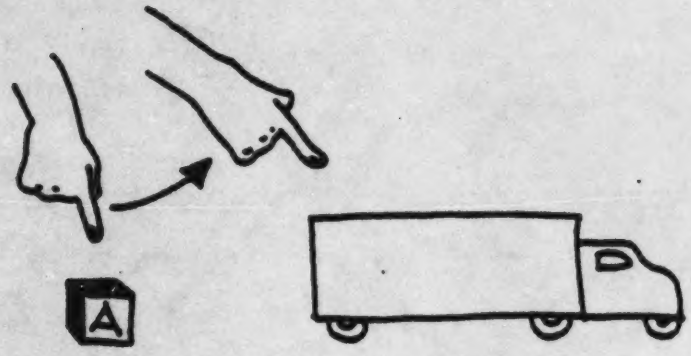
a. Extension



b. Direct Placement

Fig. 1--Illustration of Gestural Categories

ICONIC ACTION: "Put the block in the truck"



DEMONSTRATION OF ACTION: "Put the block in the truck"

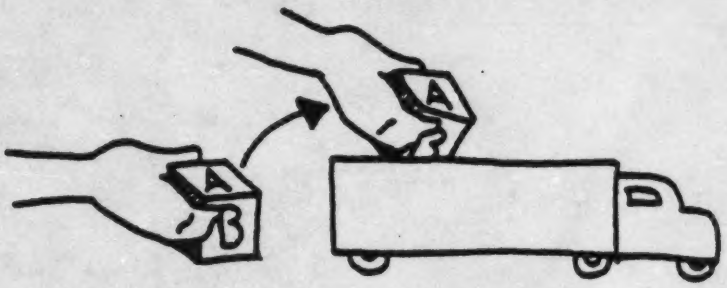


Fig. 1, cont'd.

POINTING:

POINT-TAPPING:

TAPPING:

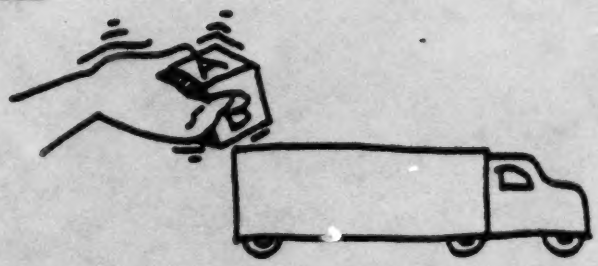


Fig. 1, cont'd.